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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/020,313

12/18/2001

Kazuhisa Fujimoto

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EXAMINER

LEROUX, ETIENNE PIERRE

ART UNIT

PAPER NUMBER

2161

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/020,313

Applicant(s)

FUJIMOTO, KAZUHISA

Examiner

Etienne P LeRoux

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-48 and 56-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-48 and 56-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Status

Claims 35-48 and 56-89 are pending; claims 1-34 and 49-55 having been cancelled.

Claims 35-48 and 56-89 are rejected as detailed below.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 35-48 and 56-89 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 35 recites:

a physical input/output port to be coupled to the IP network

the physical input/output port accessible by a block I/O request having a first port number

the physical input/output port accessible by a file I/O request having a second port number

A person skilled in the art would not be able to make and use the present invention without undue experimentation because the specification does not include the following:

Art Unit: 2161

(1) The specification does not disclose a single physical input/output port which is coupled to the Internet. Figures 1, 4, 5, 7 and 8 disclose eight(8) ports and Figures 6 and 13 disclose four(4) ports.

(2) The specification does not disclose how to assign a first port number and a second port number to a physical input/output port such that (1) the physical input/output port is accessible by a block I/O request having the first port number and (2) the physical input/output port is accessible by a file I/O request having the second port number.

(3) The specification does not disclose the difference between file-based I/O blocks and block-based I/O blocks. It is particularly unclear from the specification what comprises blocks which are not associated with file-based I/O blocks. Are these block-based I/O blocks single stand-alone blocks since they appear not to be associated with a larger entity such as a file, document or application program?

(4) The specification does not disclose how Internet traffic is divided into two categories, i.e., block-based and file-based. Furthermore, examiner maintains that files are transmitted in blocks (packets) over the Internet and thus are essentially block-based. Therefore, the difference, if indeed any, between file-based I/O blocks and block-based I/O blocks is not clear from the specification.

Furthermore, reference to Fig 13 and paragraph 154 of the specification shows that block data is stored in one of the RAID modules 43 and similarly file data is stored in one of the RAID modules 43 after the file data has been converted to block data in the file server 40. The following limitations are not supported in the specification:

Art Unit: 2161

wherein the plurality of disk drives are configured into a plurality of volumes, of which a first volume is assigned to store data related to the block I/O request and a second volume is assigned to store data related to the file I/O request.

Examiner will not give patentable weight to above limitation because it is direct contradiction to the specification of the present application.

Claims 42 and 56 include language similar to claim 35 and are rejected on the same basis as claim 35.

Claims 36-41, 43-48, 57- 89 are rejected for being dependent from a rejected base claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 35-48 and 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 6,748,448 issued to Barrera et al (hereafter Barrera), in view of US Pat No 6,029,168 issued to Frey (hereafter Frey), as best examiner is able to ascertain.

Claim 35:

Frey discloses:

a physical input/output port [Fig 2, 30, col 3, lines 60-65] coupled to the network [Fig 2,

Art Unit: 2161

Frey discloses the elements of claimed invention as noted above but does not disclose IP network. Barrera discloses IP network [Fig 1, 12]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Frey to include a IP network for the purpose of providing a well-known protocol for a WAN [Frey, col 1, line 43]

The combination of Frey and Barrera discloses a control unit coupled to the physical input/output port [Frey, Fig 2, 32]

a plurality of disk drives coupled to the control unit [Fig 2, 22]

the physical input/output port being accessible by a block I/O request having a first port number [Fig 6, 56] via the IP network and a file I/O request having a second port number [Fig 6, 60] via the IP network

wherein the plurality of disk drives are configured into a plurality of volumes, of which a first volume is assigned to store data related to the block I/O request and a second volume is assigned to store data related to the file I/O request [Frey, Fig 3A, file D, includes a single block is stored on a single server, col 4, lines 30-35, Fig 3A, file E is stored on two different servers, col 4, lines 20-35] ¹

when an I/O request received at the control unit via the physical input/output port is the block I/O request including the first port number, the control unit performs a first operation, corresponding to the first port number for storing data in the first volume [Fig 4, col 6, line 66 through col 7, line 15]

when an I/O request received at the control unit via the physical input/output port is the file I/O request including the second port number, the control unit performs a second operation,

Art Unit: 2161

corresponding to the second port number for storing data in the second volume [Fig 4 col 6, line 66 through col 7, line 15]

Claims 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Frey and Barrera and further in view of US Pat No 6,002,669 issued to White (hereafter White), as best examiner is able to ascertain.

Claim 36:

The combination of Frey and Barrera discloses the elements of claim 35 as noted above but does not disclose wherein the block I/O request has an IP packet that includes the first port number and first information including an address in the first volume. White discloses wherein the block I/O request has an IP packet that includes the first port number and first information including an address in the first volume [White, col 7, lines 25-35]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above combination of references to include wherein the block I/O request has an IP packet that includes the first port number and first information including an address in the first volume as taught by White for the purpose of directing a packet to the correct port.

Claim 37:

The combination of Frey, Barrera and White discloses the elements of claim 35 as noted above and furthermore discloses wherein the file I/O request has an IP packet that includes the second port number and second information including file data [White, col 7, lines 25-35]

Claim 38:

¹ The limitation is interpreted according to paragraph 154 of the specification which states "The file server 40

Art Unit: 2161

The combination of Frey, Barrera and White discloses the elements of claim 35 as noted above and furthermore discloses wherein the block I/O request has a TCP packet in which the first port number is included [White, col 11, lines 50-65]

Claim 39:

The combination of Frey, Barrera and White discloses the elements of claims 35 and 36 as noted above and furthermore discloses wherein the IP packet encapsulates a TCP packet in which the first port number is included [White, col 11, lines 50-65]

Claim 40:

The combination of Frey, Barrera and White discloses the elements of claim 35 as noted above and furthermore discloses wherein the first volume and the second volume are concurrently assigned [White, col 11, lines 50-65]

Claim 41:

The combination of Frey Barrera and White discloses the elements of claim 35 as noted above and furthermore discloses wherein the control unit maps relationships between logical addresses of the volumes and physical addresses of the disk drives to which data is to stored [Frey, Fig 4]

Regarding claims 42-48, 56-59, examiner maintains such claims can be rejected over the prior art made of record.

transforms the file data to block data and delivers the block data to one of the RAID modules 43.”

Claims 60-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fey and Barrera and further in view of Pub No 2002/0112022 issued to Kazar et al (hereafter Kazar), as best examiner is able to ascertain.

Claims 60, 62 and 64:

The combination of Frey and Barrera discloses the elements of claim 35 as noted above but does not disclose wherein a format of file I/O related to the file I/O request is on the basis of NFS protocol, and the second operation is performed on the basis of the NFS protocol. Kazar discloses the NFS protocol [paragraph2]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify above combination of references to include wherein a format of file I/O related to the file I/O request is on the basis of NFS protocol, and the second operation is performed on the basis of the NFS protocol based on the teachings of Kazar for the purpose of complying with normal NAS file servers [Kazar, paragraph 2].

Claims 61, 63 and 65:

The combination of Frey and Barrera discloses the elements of claim 35 as noted above but does not disclose wherein a format of file I/O related to the file I/O request is on the basis of NFS protocol, and the second operation is performed on the basis of the SCSI protocol. Kazar discloses the SCSI protocol [paragraph2]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify above combination of references to include wherein a format of file I/O related to the file I/O request is on the basis of SCSI protocol, and the second operation is performed on the basis of the SCSI protocol based on the teachings of Kazar for the purpose of complying with normal NAS file servers [Kazar, paragraph 2].

Art Unit: 2161

Regarding claims 66-89, examiner maintains such claims can be rejected over the prior art made of record.

Response to Arguments

Applicant's arguments filed 11/1/2006 have been carefully considered but are not persuasive for the reasons states below:

Applicant Argues:

Applicant states in the third paragraph of page 18 "It is submitted that one of ordinary skill in the art can easily understand how different port numbers can be received at a physical input output port."

Examiner Responds:

Examiner is not persuaded. Applicant **ignores** (emphasis added) the claim language. Claim 35 includes the limitation "the physical input/output port being accessible by a block I/O request having a first port number via the IP network and a file I/O request having a second port number via the IP network."

Claim 35 claims **the** (emphasis added) physical input/output port is **accessible** (emphasis added), (1) by a block I/O request having a first port number and (2) file I/O request having a second port number. One of ordinary skill in the art would not know how to **access** (emphasis added) a (i.e. single) physical I/O port by means of two different numbers (i.e. a first number and a second number).

Art Unit: 2161

Examiner requests Applicant to provide evidence from the prior art why the above limitation would have been obvious to the ordinarily skilled artisan. Examiner maintains the prosecution record shows that Applicant merely provides opinion evidence rather than factual evidence. In fact, examiner searched the prior art and found **zero** (emphasis added) paragraphs where a physical input/output port was mentioned in conjunction with a first port number and a second port number.

Applicant Argues:

Applicant states in the paragraph joining pages 18 and 19 the following:
The Internet Assigned Numbers Authority (IANA) is responsible for assigning TCP and UDP port numbers to specific uses. The port numbers are divided into three ranges: the Well Known Ports, the Registered Ports, the Dynamic and/or Private Ports (see <http://en.wikipedia.org/wik/TCP> and UDP port numbers.

Examiner Responds:

Examiner is not persuaded. Above constitutes new matter and will not be admitted into the record. Furthermore, Form Paragraph 7.29.04 states:

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Still further, above explanation by Applicant does not address the claim limitation which states "the physical input/output port being accessible by a block I/O request having a first port number via the IP network and a file I/O request having a second port number via the IP network." Claim 35 claims **the** (emphasis added) physical input/output port is **accessible**

Art Unit: 2161

(emphasis added), (1) by a block I/O request having a first port number and (2) file I/O request having a second port number.

Applicant Argues:

Applicant states in the second paragraph of page 19 the following:

Therefore, one of ordinary skill in the art can easily understand that a first port number indicates the presence of block data while the second port number indicates the presence of file data.

Examiner Responds:

Examiner is not persuaded. Above explanation by Applicant does not address the claim limitation which states “the physical input/output port being accessible by a block I/O request having a first port number via the IP network and a file I/O request having a second port number via the IP network.” Claim 35 claims **the** (emphasis added) physical input/output port is **accessible** (emphasis added), (1) by a block I/O request having a first port number and (2) file I/O request having a second port number.

Applicant Argues:

Applicant in paragraphs 3 and 4 of page 19 and paragraphs 1-3 of page 20 continues to fail to address the claim limitation “the physical input/output port being accessible by a block I/O request having a first port number via the IP network and a file I/O request having a second port number via the IP network” when providing responses to the rejection under the first paragraph of 35 U.S.C. 112.

Examiner concludes the rejection under the first paragraph of 35 U.S.C. 112 of the claims limitation “the physical input/output port being accessible by a block I/O request having a first

Art Unit: 2161

port number via the IP network and a file I/O request having a second port number via the IP network" is proper.

Regarding Applicant's prior art arguments, examiner maintains the arguments are moot based on above new grounds of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne P LeRoux whose telephone number is (571) 272-4022. The examiner can normally be reached on Monday through Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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Etienne LeRoux

12/14/2006

Etienne P LeRoux
Primary Examiner